

5 What is claimed is:

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1. A process for automatically sorting a random assemblage of products into individual orders which comprises:
    - a) providing at least one computer having access to one or more databases in which is stored i) order information for a multiplicity of orders for the same or different products, and ii) product identifier information;
    - b) providing a random assemblage of products in response to said order information, each of said products having a product identifier thereon;
    - c) scanning the product identifiers on the products of said random assemblage to cause sorting by transferring products associated with a particular order to an order builder zone for that order.
  2. The process of Claim 1 wherein said one or more databases also has stored therein iii) label information, said label information including a label sequence by which labels will be applied to products associated with a particular order; and wherein in step (c) said transferring further comprises placing said products in said order builder zone in a sequence that corresponds to the label sequence for said particular order.
  3. The process of Claim 1 wherein said order builder zone is comprised of a plurality of lanes, one or more of said lanes being dedicated to said particular order.
  4. The process of Claim 1 wherein said order builder zone is comprised of a plurality of lanes, one or more of said lanes being dedicated to an assigned sequence i) for a portion of said order or ii) for one or more orders.
  5. The process of Claim 2 further comprising step (d): feeding the products associated with said particular order from the order builder zone to a label application zone in a sequence that matches the label sequence.
  6. The process of Claim 5 further comprising matching the label to the product before said label is applied at the label application zone.

7. The process of Claim 1 further comprising step (d): conveying the products associated with said particular order after placement in the order builder zone to an accumulation zone.
8. The process of Claim 2 further comprising step (d): conveying the products associated with said particular order after placement in the order builder zone to an accumulation zone; and step (e): feeding the products associated with said particular order from the accumulation zone to a label application zone in a sequence that matches the label sequence. *158*
9. The process of Claim 1 wherein, in step (b), the random assemblage of products is provided on a conveyor belt.
10. The process of Claim 1 wherein said product identifier is a barcode and said scanning is by one or more barcode readers.
11. The process of Claim 1 wherein said sorting is provided by a transfer device having grippers thereon.
12. The process of Claim 1 further comprising singulating products from the random assemblage of products prior to said sorting step.
13. The process of Claim 1 wherein said one or more databases also has stored therein inventory sequence, said inventory sequence being the sequence by which said random assemblage of products were picked from inventory; said process further comprising comparing the sequence of the product identifiers on said random assemblage of products, after said scanning of step (c), to said inventory sequence to match same.
14. The process of Claim 13 further comprising providing an indication when the sequence of the product identifiers on said random assemblage of products does not match the inventory sequence.
15. A process for automatically sorting and sequencing a random assemblage of products which comprises:
- receiving a multiplicity of orders for the same or different products and storing same in one or more databases in which is also stored label information, including a label sequence by which labels will be applied to the individual products associated with each order, and in which is also stored product identifier information;
  - providing at least one computer having access to said one or more databases;

- c) providing products in fulfillment of said multiplicity of orders to a scanner in a random sequence, each of said products having thereon a product identifier;
  - d) scanning the product identifier on each product and determining from said one or more databases which of the multiplicity of orders each product belongs to and where
- 5      each product belongs in the label sequence;
- e) grouping together the individual products associated with each order and sequencing them to match the label sequence.
16. The process of Claim 15 further comprising, after step (e), feeding the individual products that have been sequenced a label applicator whereat labels are applied
- 10     to said individual products according to said label sequence.
17. The process of Claim 15 wherein said labels have thereon graphics customized for at least some of said orders.
18. The process of Claim 17 wherein said products comprise prescription products.
- 15     19. The process of Claim 18 wherein said prescription products comprise ophthalmic lenses, said ophthalmic lenses housed in packaging, said packaging having thereon said product identifier.
- 20     20. The process of Claim 19 wherein said packaging is a carton and said product identifier is a barcode.
- 20     21. The process of Claim 15 further comprising assigning, in said one or more databases, an order number to each order constituting the multiplicity of orders, and assigning to each said order number the product identifier for each individual product associated with said order.
- 25     22. The process of Claim 17 further comprising, in said one or more databases, grouping each said order number together with its product identifiers, the sequence of which constitutes the label sequence.
- ✓ 23. A system for automatically sorting a random assemblage of products into individual orders, each of said products having a product identifier thereon, which comprises:

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- (a) one or more databases in which is stored i) order information for a multiplicity of orders for the same or different products, and ii) product identifier information;
- (b) at least one computer having access to said one or more databases;
- 5 (c) scanning means to read the product identifiers on said random assemblage of products and input same into said one or more databases;
- (d) sorting means controlled by said computer to transfer products associated with a particular order to an order builder zone for that order.

24. The system of Claim 23 wherein in said one or more databases is also stored  
10 iii) label information, said label information including a label sequence by which labels will be applied to products associated with a particular order; and wherein said sorting means (d) further places said products in a sequence corresponding to said label sequence.

25. The system of Claim 24 further comprising a first transfer means to transport  
15 said random assemblage of products to said scanning means.

26. The system of Claim 25 further comprising means to convey said sequenced products to an accumulation zone.

27. The system of Claim 26 further comprising a second transfer means to transport said sequenced products from said accumulation zone to a third transfer means  
20 feeding a label application zone.

28. The system of Claim 27 wherein said sorting means is a first transfer device having grippers thereon; said first transfer means is a conveyor belt; said second transfer means is a second transfer device having grippers thereon; and said third transfer means is a conveyor belt.

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